SUMMARY

INTRODUCTION

The Las Cruces Field Office of the Bureau of Land Management (BLM) has prepared this Resource Management Plan Amendment (RMPA) and Environmental Impact Statement (EIS) to address Federal fluid minerals (oil, gas, and geothermal) leasing in Sierra and Otero Counties (referred to as the Planning Area). The RMPA amends the 1986 Resource Management Plan (RMP) for the White Sands Resource Area. The objective of the RMPA is to determine (1) which lands overlying Federal fluid minerals are suitable and available for leasing and subsequent development and (2) how those leased lands will be managed. The EIS identifies the potential impacts that alternative plans for fluid minerals leasing and subsequent activities could have on the environment and identifies appropriate measures to mitigate those impacts.

This RMPA/EIS, prepared to meet the current requirements of the Federal fluid minerals program, is not the final review upon which approval of all actions in the Planning Area will be based. Environmental analyses and additional National Environmental Policy Act (NEPA) compliance will be required for all site-specific actions. However, the scope of the site-specific approval process will be streamlined and facilitated by the programmatic evaluation of impacts contained in this RMPA/EIS.

Sierra and Otero Counties are located in south-central New Mexico. Of the approximately 7 million acres of Federal, State, tribal, and private lands in Sierra and Otero Counties, BLM administers approximately 1.8 million surface acres and 5 million acres of Federal fluid mineral (subsurface) estate. The latter is the area within which BLM has the authority to approve leases (including privately or State-owned surface acreage overlying Federally owned fluid minerals). Although BLM is responsible for considering potential impacts on all resources in the Planning Area regardless of ownership or management, BLM can make decisions regarding surface management for actions only on public land and subsurface Federal mineral estate (administered by BLM). Public land and private split-estate lands are referred to in this document as BLM's Decision Area.

The planning and environmental process began in October 1998 with scoping, a set of activities to identify issues early in the analysis. The results of scoping were documented in a Scoping Summary Report in January 1999. Data collection and preparation of the Management Situation Analysis continued from Fall 1998 through Spring 1999. A characterization of the existing environment is summarized in Chapter 3. This information contributed to the formulation of the alternatives, which are based on the management guidance to be applied to a set of resource concerns that were identified (Chapter 2). The impact assessment was conducted based on the reasonably foreseeable development of Federal fluid minerals over a period of the next 20 years (Appendix A-IV) and an understanding of

the standard operating procedures for fluid minerals exploration, development, production, and abandonment (as described in Appendix B).

ALTERNATIVES

A total of five alternatives were addressed. Two alternatives were considered but eliminated from further analysis and three alternatives were developed and evaluated in detail: No-action Alternative, Alternative A, and Alternative B. The alternatives were developed to respond to issues identified through the scoping process, explore alternatives to existing management direction, comply with BLM's planning guidelines for Federal fluid mineral resources, and comply with the Federal Land Policy and Management Act (FLPMA) requirement of managing public land for sustained yield and multiple use. The reasonable foreseeable fluid minerals development and associated surface disturbance predicted for the Planning Area over the 20-year planning period remains the same for each alternative. Therefore, the alternatives were formulated based on the extent of modification to the existing management situation as it applies to certain resources that were identified as concerns.

For fluid minerals, objectives for managing public lands and associated resources are defined in terms of the availability of land for leasing (closed or open to leasing) and management of lands that are open (with standard lease terms and conditions or stipulations).

Public land may be closed nondiscretionarily or discretionarily. Public land may be open with no specific management decisions defined, but is subject to standard lease terms and conditions. Or, lands open to leasing may be managed with constraints in the form of stipulations, which are conditions included in a lease when planning and environmental analyses have demonstrated that additional and more stringent protection is needed. The three types of lease stipulations used in this RMPA/EIS are (1) no surface occupancy, (2) controlled surface use, and (3) timing limitation.

The three alternatives are distinguished by the type and degree of constraints. The No-action Alternative represents the continuation of existing management. Compliance with laws and regulations would continue on a case-by-case basis. The objective of Alternative A is to modify the existing management direction to respond to legislative or regulatory requirements and/or management objectives that otherwise would be achieved on a case-by-case basis under the No-action Alternative (Existing Management). Alternative B also responds to legislative or regulatory requirements and/or management objectives, but provides a relatively greater emphasis on resource protection by imposing more constraints on fluid minerals leasing and development. A summary of leasing constraints is provided in Table S-1 at the end of this section.

At this Draft RMPA/EIS step of the environmental review process, BLM's preferred alternative is Alternative A. Alternative A would satisfy the requirement to establish fluid mineral determinations (i.e., identify lands available for leasing and how those leased lands are managed to adequately protect resources) while sustaining the ability to achieve the RFD and fulfilling BLM's mandate of multiple use and sustained yield as directed under FLPMA. However, based on the results of public review of and comment on this Draft RMPA/EIS, the Las Cruces Field Manager will recommend and the BLM State Director will select an alternative or a combination of the alternatives to be the Proposed RMPA and publish it along with the Final EIS. A final decision will be made after a 60-day Governor's Consistency Review and a 30-day protest period. A Record of Decision (ROD) and approved RMPA then will be published.

AFFECTED ENVIRONMENT

Chapter 3 addresses the existing condition of the human and natural environment that potentially could be affected by the alternatives. The majority of data and information was extracted and used from existing data on file at the Las Cruces Field Office of BLM. Data included published and unpublished reports, maps, and digital format (geographic information system) data. The affected environment is characterized for the following general resource concerns:

- lands and access
- geology and minerals
- soils
- water resources
- air quality
- noise
- vegetation
- wildlife
- special status species
- rangeland
- cultural resources
- paleontological resources
- recreation
- visual resources
- special management areas
- social and economic conditions

While data for these resources were being compiled, relevant geological data were compiled and reviewed to estimate the potential for oil and gas and geothermal resources in the Planning Area. These and other historical data served as a basis for estimating the fluid minerals development that is reasonably foreseeable over the planning period of the next 20 years.

ENVIRONMENTAL CONSEQUENCES

Using the information regarding the affected environment (Chapter 3), a description of the standard operating procedures for fluid minerals activities (Appendix B), and the reasonable foreseeable development (RFD) projected for the Planning Area (Appendix A-IV), the types of impacts that each

alternative could have on the resources were identified and quantified only to the extent practical for this programmatic document. No ground-disturbing activities would be authorized and result directly from the alternatives addressed in this document; however, leases issued subsequent to and associated with this document could result in surface-disturbing activities. Therefore, further site- and project-specific environmental evaluation is required prior to final approval of the activities.

As part of estimating the RFD, the potential for fluid mineral resources to exist in the Planning Area was derived from available geologic data. For oil and gas, the results indicate that there is medium and low potential throughout the Planning Area. For geothermal resources, several areas of high potential were identified. Although locations of future development are not assured, there are some historical data available and recent interest in fluid minerals that suggest locations likely to experience development. A recent gas discovery on Otero Mesa in southern Otero County suggests that as a location for additional gas development. Areas of high potential for geothermal resources within BLM's Decision Area occur in the vicinity of Truth or Consequences, Arrey, and Derry in Sierra County.

The RFD is a projection of the Federal fluid mineral actions that are likely to occur in the Planning Area over the next 20 years. For oil and gas resources, it is possible that three fields could be developed. The approximate number of acres that are projected to be disturbed directly from activities are 6,590 in the short term (one to three years from implementation of ground-disturbing actions) and 862 over the long term (up to 20 to 30 years). Based on historical information, it is likely that future wells drilled for Federal oil and gas resources would be on lands under the surface jurisdiction of the BLM. For geothermal resources, the approximate number of acres that are projected to be disturbed from geothermal activities are 26.6.

Impacts identified are summarized in Table S-2 at the end of this section. Alternative A incorporates many of the stipulations that are likely to accompany the current leasing process. The management guidance is more comprehensive in Alternative A relative to the No-action Alternative and consequently may allow for a more efficient leasing process. Alternative B provides greater protection to resources, with management emphasis on avoidance of impacts on selected resources. Overall, significant adverse impacts are not anticipated for environmental resources under any of the alternatives with the possible exception of visual resources. This is primarily the result of the comparatively small amount of surface disturbance projected for the RFD and assumes the inclusion of best management practices and other mitigating measures (Appendix A-III).

However, under certain circumstances, cumulative effects may result in significant impacts. Cumulative impacts, as defined by Title 40 of the Code of Federal Regulations, Part 1508.7, are those impacts that result from the incremental impact of an action "when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

This RMPA/EIS is programmatic in nature and too broad in scope to define the relationships between potential fluid minerals activities and other past, present, and reasonably foreseeable future actions since it is not known at this time which land will be available for leasing and how that land and associated resources will be managed for fluid minerals activities. Therefore, past, present, and potential reasonably foreseeable future actions are addressed generally in this document and will be considered on a case-by-case basis for each lease application and application for permit to drill (APD). In addition, because the RFD is the same for all alternatives, no variation in the level of cumulative impacts is anticipated among the alternatives.

Overall, the cumulative impacts for leasing activities are anticipated to be minimal for most resources over the 20-year planning time frame, due to the limited nature of expected surface disturbance unless a substantial amount of development were to occur in one area that has sensitive resource concerns. Potential cumulative impacts may be anticipated to occur on visual resources, wildlife habitat, groundwater levels, surface water quality, and socioeconomic resources, as described below.

Because of the open and undeveloped landscape within BLM's Decision Area, the potential exists for cumulative visual impacts if development occurs in visual proximity to other past, present, or reasonably foreseeable future actions. The greatest concern is if the combination of visual effects of the proposed action and other development were to result in a moderate to strong visual contrast to the setting. These types of cumulative impacts may be mitigated through siting and other proposed mitigation measures.

Another cumulative impact may result in the form of habitat fragmentation due to clearing for facilities and/or road development. Although the volume of anticipated road development is not large relative to the existing road network, the density or location of new access may have a cumulative effect on a previously undisturbed area. Although the associated road networks would not be particularly dense, especially given the existing access in the Planning Area and possibilities for co-location, the cumulative effect may be notable in terms of habitat fragmentation for larger wildlife. However, trips are expected to decrease once wells are in production since only maintenance visits are required.

With regard to groundwater resources, water demands such as irrigation and domestic needs due to population growth could make even the small water requirements for fluid minerals development a burden to the water system. Declining water levels are of concern to residents of Otero County; however, fluid minerals development on non-Federal land is not expected to greatly increase the water supply demands in the Planning Area by more than twofold. None of the other potential projects in the area are believe to impact the supply of groundwater resources.

Indirect impacts on surface water quality also may be cumulative due to incremental impacts of the actions taken within the Planning Area when added to other past, present, and future actions that could adversely affect downstream receiving waters.

Positive primary and secondary effects on local economies would be small in magnitude; thus, the total positive benefits are not anticipated to produce a significant cumulative impact. As a result, the adverse impacts associated with stress on communities due to rapid growth also is not anticipated as a long-term significant impact.

CONSULTATION AND COORDINATION

The analysis for this RMPA/EIS was completed in consultation with other agencies and the public. Agencies consulted include the U.S. Fish and Wildlife Service, New Mexico Department of Game & Fish, New Mexico Natural Resources Department, the State Historic Preservation Officer, and other Federal and State agencies and local governments as appropriate. Public scoping meetings were held in November, 1998, and written comments have been received from members of the public and representatives from the oil and gas industry. The Draft RMPA/EIS has been distributed to relevant agencies and the interested public for review and comments, which will be addressed in the Proposed RMPA/Final EIS.

TABLE S-1
SUMMARY OF LEASING CONSTRAINTS IN DECISION AREA BY ALTERNATIVE

Constraint	Alternatives		
	No-action Alternative (Existing Management)	**Alternative A**	**Alternative B**
Closed to Leasing			
Nondiscretionary Closure	# Old Air Force bombing and gunnery range # Public water reserves # Air navigation site # Wilderness Study Areas (WSAs)	# Old Air Force bombing and gunnery range # Public water reserves # Air navigation site # WSAs	# Old Air Force bombing and gunnery range # Public water reserves # Air navigation site # WSAs

TABLE S-1
SUMMARY OF LEASING CONSTRAINTS IN DECISION AREA BY ALTERNATIVE

Constraint	Alternatives		
	No-action Alternative (Existing Management)	**Alternative A**	**Alternative B**
Discretionary Closure	# Visual Resource Management (VRM) Class I # Areas of Critical Environmental Concern (ACECs, 6)	# Rattlesnake Hill Archaeological District # VRM Class I # ACECs (6)	# Watershed areas (5) # Special status species habitats # Percha Creek Riparian Habitat Area # Lake Valley Historic Townsite # Rattlesnake Hill Archaeological District # Jarilla Mountains # Tularosa River # Red Sands Off-road Vehicle (ORV) Area # VRM Classes I and II # VRM and ORV limited areas # Cuchillo Mountains Piñon Nut Collection Area # Lake Valley Back-country Byway # ACECs (6) # Nominated ACECs (8)

TABLE S-1
SUMMARY OF LEASING CONSTRAINTS IN DECISION AREA BY ALTERNATIVE

Constraint	Alternatives		
	No-action Alternative (Existing Management)	**Alternative A**	**Alternative B**
Open for Leasing			
No Surface Occupancy	# Caballo Mountain Communication Site # Recreation and Public Purpose (R&PPs) patents and leases # Ecological study plots (6) # Rattlesnake Hill Archaeological District # Tularosa River	# R&PPs # Community Pit 7 # Riparian/Wetlands/Playas # Ecological study plots (6) # Nutt and Otero Mesa desert grassland areas # Percha Creek Riparian Habitat Area # Lake Valley Historic Townsite # Lone Butte # Tularosa River	# R&PPs # Community Pit 7 # Riparian/Wetland/Playas # Ecological study plots (6) # Nutt and Otero Mesa desert grassland areas # Black-tailed prairie dog habitat # Lone Butte # Mormon Battalion Trail # Butterfield Trail # Jornada del Muerto Trail
Controlled Surface Use and Timing Limitation	# None	# Bighorn sheep habitat	# Bighorn sheep habitat

TABLE S-1
SUMMARY OF LEASING CONSTRAINTS IN DECISION AREA BY ALTERNATIVE

Constraint	Alternatives		
	No-action Alternative (Existing Management)	**Alternative A**	**Alternative B**
Controlled Surface Use	# Butterfield Trail # Jornada del Muerto Trail	# Berrendo Administrative Camp Site # Highly erosive and fragile soils # Watershed areas (5) # Big Game Habitat Areas # Crucial habitats # Special status species habitats # Jarilla Mountains # Mormon Battalion Trail # Butterfield Trail # Jornada del Muerto Trail # VRM Class II # VRM and ORV limited areas # Cuchillo Mountains Piñon Nut Collection Area # Lake Valley Back-country Byway # Nominated ACECs	# Berrendo Administrative Camp Site # Highly erosive and fragile soils # Big Game Habitat Areas # Crucial habitats # VRM Class III
Timing Limitation	# White Sands Missile Range Safety Evacuation Area	# White Sands Missile Range Safety Evacuation Area # Red Sands ORV Area	# White Sands Missile Range Safety Evacuation Area

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Constraints	Within the Planning Area, lands administered by the military and National Park Service, as well as villages, towns, and incorporated cities are all nondiscretionarily closed to leasing. Within BLM's Decision Area: # Closed to leasing - 63,721 acres (3%) 46,047 acres nondiscretionary closures 17,673 acres discretionary closures # Open with stipulations - 243,784 acres (12%) # Open with standard lease terms and conditions (SLTC) - 1,747,500 acres (85%)	Within the Planning Area, lands administered by the military and National Park Service, as well as villages, towns, and incorporated cities are all nondiscretionarily closed to leasing. Within BLM's Decision Area: # Closed to leasing - 64,605 acres (3%) 46,047 acres nondiscretionary closures 18,557 acres discretionary closures # Open with stipulations - 1,209,307 acres (75%) # Open with STLC - 779,093 acres (38%)	Within the Planning Area, lands administered by the military and National Park Service, as well as villages, towns, and incorporated cities are all nondiscretionarily closed to leasing. Within BLM's Decision Area: # Closed to leasing - 325,155 acres (16%) 46,047 acres nondiscretionary closures 279,108 acres discretionary closures # Open with stipulations - 1,095,622 acres (63%) # Open with STLC - 632,228 acres (31%)

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Lands and Access	Considering that a small percentage of land that could be disturbed to achieve the reasonable foreseeable development (RFD) scenario, and that the majority of designated lands are dispersed and most could be avoided, overall impacts on lands and access or on the ability to explore for or exploit fluid minerals would be expected to be minimal. Use of existing access is encouraged in order to avoid or minimize impacts. If new access were needed for fluid minerals activities, impacts from road construction would be unavoidable, but mitigable.	Under Alternative A, potential impacts would be the same as the No-action Alternative except that greater protection is afforded Community Pit 7 (80 acres, no surface occupancy).	Under Alternative B, potential impacts would be the same as Alternative A.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Mineral Resources	Production of fluid minerals is beneficial socioeconomically. Geothermal resources are renewable; however, oil and gas production results in an irreversible commitment of resources. Under the No-action Alternative, considering the large percentage of lands available for leasing and development, the ability to explore for and exploit fluid mineral resources is sufficient to achieve the RFD.	As explained for the No-action Alternative, production of fluid minerals is beneficial socioeconomically. Geothermal resources are renewable; however, oil and gas production results in an irreversible commitment of resources. Under Alternative A, the surface management constraints as well as required mitigation and best management practices imposed by Alternative A are not anticipated to significantly impact the ability to explore for or exploit oil and gas resources. However, some surface management requirements in certain areas potentially may burden a project financially. The costs of management versus anticipated revenue from a project may delay the project or make a project infeasible.	As explained for the No-action Alternative, production of fluid minerals is beneficial socioeconomically. Geothermal resources are renewable; however, oil and gas production results in an irreversible commitment of resources. Under Alternative B, protection of resources is greater. The ability to explore and exploit fluid mineral resources (that is, the ability to achieve the RFD) could be affected, and could be significantly affected locally, due to the increase in the acres of lands unavailable for leasing (discretionary closures) and stipulations of no surface occupancy (over Alternative A) in areas of medium potential for oil and gas and medium and high potential for geothermal resources. Also, as described under Alternative A, some surface management requirements in certain areas potentially may burden the project financially.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Soils	While impacts on highly erosive and fragile soils would occur, such impacts can be mitigated through implementing mitigation procedures under STLC implemented through conditions of approval. Prime farmland may be taken out of production, but impacts would be expected to be short term. Impacts are expected to be minimal.	Under Alternative A, anticipated impacts on highly erosive and fragile soils would be similar to the No-action Alternative. Occupancy or use of such areas would be considered on a case-by-case basis and best management practices and conditions of approval could be imposed to mitigate potential impacts. Impacts would be expected to be minimal.	Under Alternative B, impacts on highly erosive and fragile soils would not occur on lands where there are additional discretionary closures. Otherwise, impacts anticipated under Alternative B are similar to Alternative A.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Watersheds and Water Resources	Under existing management, potential impacts on groundwater would be expected to be minimal. For surface water, based on the protection provided by existing management direction, impacts on surface water (including watersheds) are expected to be minimal.	Under Alternative A, potential impacts on groundwater are anticipated to be similar to the No-action Alternative. For surface water features such as watersheds, occupancy or use in sensitive areas would be considered on a case-by-case basis and impacts could be mitigated by implementing best management practices and other conditions of approval. Impacts on riparian, other wetlands, and playas would be minimized or eliminated by imposing the stipulation of no surface occupancy within 0.25 mile (400 meters). Impacts on other surface water features could be mitigated through avoidance, or implementation of best management practices and other conditions of approval. Impacts on surface water could be less than those identified under the No-action Alternative and would be expected to be minimal.	Under Alternative B, potential impacts on groundwater are anticipated to be similar to the No-action Alternative and Alternative A. For surface water, watershed areas would be closed to leasing, thereby minimizing or eliminating impacts of fluid minerals activities on watershed areas. Impacts on riparian, other wetlands, and playas would be minimized or eliminated by imposing the stipulation of no surface occupancy within 0.5 mile (800 meters). Impacts on other surface water features can be mitigated through avoidance, or implementation of best management practices and other conditions of approval. Impacts on surface water may be less than those identified under the No-action Alternative or Alternative A and would be expected to be minimal.
Noise	Depending on site-specific conditions, there would be noise impacts on human and wildlife receptors that could be reduced, but could not be eliminated.	Under Alternative A, potential impacts from noise would be the same as the No-action Alternative.	Under Alternative B, potential impacts from noise would be the same as the No-action Alternative and Alternative A.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Vegetation	Considering the small percentage of land that could be disturbed to achieve the RFD over a period of 20 years and with proper reclamation, potential impacts on vegetation in BLM's Decision Area would be expected to be minimal. However, if the RFD were realized and focused in one area, impacts on vegetation could be more substantial resulting in direct impacts such as loss of habitat and fragmentation of habitat, and indirect impacts such as loss of topsoil through erosion. Also, spread of noxious weeds by field activities could impact native vegetation. Impacts can be reduced by protective measures and reclamation under the provisions of SLTC implemented through conditions of approval. All ecological study plots have a stipulation of no surface occupancy; therefore, potential impacts would be minimized or eliminated in those areas.	Under Alternative A, anticipated impacts on vegetation would be expected to be the same as the No-action Alternative. Impacts could be reduced by protective measures and reclamation under SLTC and best management practices implemented through conditions of approval.	Under Alternative B, anticipated impacts on vegetation would be expected to be the same as the No-action Alternative and Alternative A.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Wildlife	As with vegetation, considering the small percentage of land that could be disturbed to achieve the RFD over a period of 20 years, impacts on wildlife in BLM's Decision Area in general would be expected to be minimal. However, if the RFD were realized and focused in one area, impacts from human activity, noise, and traffic on wildlife could be more substantial. Under existing management, wildlife and crucial habitat are managed for fluid minerals as open with SLTC. If impacts on important resources were identified during site-specific investigations, SLTC allow for relocating the site a distance of up to 656 feet (200 meters), which may not be adequate to avoid such resources. SLTC also allow for delaying activities up to 60 days, although birthing and nesting periods are often longer than 60 days. SLTC would not necessarily allow BLM to substantively mitigate impacts on wildlife and fish habitat Detrimental effects that could occur under existing management include:	Under Alternative A, impacts on wildlife would be reduced from the No-action Alternative. In particular, big game habitat areas would have a stipulation for controlled surface use; that is, site-specific fluid minerals operations would avoid known populations and habitat. Habitat suitable for bighorn sheep would be managed using reasonable measures necessary to protect potential habitat from degradation and minimize adverse impacts on occupied habitat during lambing season. Each exploration and development project would be reviewed carefully to identify potential effects on the species and habitat, and a high potential exists for imposing timing limitations and other conditions of approval resulting from BLM analysis. Crucial habitat (grasslands, montane scrub, and woodland/forest) would be managed under SLTC, with best management practices and other conditions of approval to minimize loss and fragmentation of habitat.	Under Alternative B, anticipated impacts on wildlife are expected to be the same as the No-action Alternative and Alternative A.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Wildlife (continued)	(1) disturbance of birthing areas, (2) road construction into isolated or unroaded areas, (3) disturbance to nesting and waterfowl, and (4) impacts on crucial habitat (e.g., loss, fragmentation).		
Special Status Species	Based on the protection provided by existing management direction, under the provisions of SLTC implemented through conditions of approval, potential impacts on special status species would be expected to be minimal. All exploration and development activities must follow requirements of Section 7 of the Endangered Species Act and current BLM policy. Under existing management, if impacts on special status species were identified during site-specific investigations, SLTC allow for relocating the site within a reasonable distance (e.g., as much as or more than 200 meters). SLTC also allow for delaying activities within a reasonable time period (e.g., as much as or more than 60 days).	Under Alternative A, impacts on special status species would be reduced from the No-action Alternative. In addition to the protective requirements under the No-action Alternative, special status species would be managed under the stipulation of controlled surface use. Site-specific fluid minerals operations would avoid known populations and habitat. Each exploration and development project would be reviewed carefully to identify potential effects on the species and habitat, and a high potential exists for imposing timing limitations and other conditions of approval resulting from BLM analysis. Potential impacts would be expected to be minimal.	Under Alternative B, occupied or essential habitat associated with special status species would be closed to leasing, thereby minimizing or eliminating impacts from fluid minerals activities on those species.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Cultural Resources	Based on the protection provided by existing management direction, impacts on cultural resources would be expected to be minimal. Potential impacts on cultural resources would be reviewed and considered in accordance with Section 106 of the National Historic Preservation Act using established procedures. Implementation of such procedures would be expected to result in avoidance of any identified adverse effects or satisfactory mitigation of those effects.	Under Alternative A, potential impacts on cultural resources of particular concern would be reduced from the No-action Alternative. More restrictive stipulations (controlled surface use, no surface occupancy, and discretionary closures) would further protect these important cultural resources. Other cultural resources would be protected as described under the No-action Alternative. Potential impacts would be expected to be minimal.	Under Alternative B, potential impacts on cultural resources of particular concern would be reduced further from Alternative A by managing these resources with even more restrictive stipulations. Other cultural resources would be protected as described under the No-action Alternative. Potential impacts would be expected to be minimal.
Recreation	Considering the small percentage of land that could be disturbed to achieve the RFD over a period of 20 years, and that the majority of designated recreation areas are dispersed and most likely could be avoided, impacts on recreation in general would be minimal. A portion of the recreation areas along the Tularosa River are managed allowing no surface occupancy; therefore, impacts would be minimized or eliminated in that area.	Under Alternative A, potential impacts on recreational resources in general and Tularosa River area would be the same as the No-action Alternative. Recreational resources of particular concern would be given more protection through stipulations (timing limitation or controlled surface use) intended to preserve the recreational experience.	Under Alternative B, potential impacts on recreational resources in general would be the same as the No-action Alternative. Recreational resources of particular concern would be given greater protection than Alternative A by closing them to leasing, thereby preserving the recreational experience and minimizing or eliminating potential impacts from fluid minerals activities.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Visual Resources	Under existing management, Visual Resources Management (VRM) Class I areas are closed to leasing and, therefore, no visual impacts would occur in these locations as a result of fluid minerals activities. VRM Classes II, III, and IV are managed with SLTC, under which development of facilities has the potential to result in significant visual impacts in some areas. Development likely would result in contrast of line, form, color, and texture to the characteristic landscape and would attract attention depending on the location and proximity to sensitive viewers. Impacts on other areas may occur due to the introduction of facilities that are not characteristic of the existing setting, but can be mitigated.	Under Alternative A, potential impacts on visual resources would be the same as the No-action Alternative except that a more restrictive stipulation (controlled surface use) on areas designated as VRM Class II would reduce impacts in these areas.	Under Alternative B, potential impacts on visual resources would be the same as Alternative A except that a more restrictive stipulation (controlled surface use) in areas designated as VRM Class III would reduce impacts in these areas.

TABLE S-2
SUMMARY OF POTENTIAL IMPACTS BY ALTERNATIVE

Resources	No-action Alternative (Existing Management)	Alternative A	Alternative B
Special Management Areas	Under existing management, Wilderness Study Areas (WSAs) and Areas of Critical Environmental Concern (ACECs) are closed to leasing, thereby minimizing or eliminating potential impacts on these resources from fluid minerals activities. Nominated ACECs are managed with SLTC; however, because these areas were nominated primarily to protect special status species and associated habitat, requirements for special status species described above would apply.	Under Alternative A, potential impacts on WSAs and ACECs would be the same as the No-action Alternative. Potential impacts on nominated ACECs could be reduced. In addition to the requirements described under the No-action Alternative, nominated ACECs would be managed with the stipulation of controlled surface use.	Under Alternative B, potential impacts on WSAs and ACECs would be the same as the No-action Alternative and Alternative A. Nominated ACECs would be closed to leasing, thereby minimizing or eliminating potential impacts from fluid minerals activities.
Social and Economic Conditions	The achievement of the RFD would result in positive primary and secondary economic effects as well as generate royalties and tax revenue. Environmental justice issues were considered and no significant adverse impacts that would disproportionately affect minority or low-income communities are anticipated at this time.	Under Alternative A, potential impacts would be the same as the No-action Alternative.	Under Alternative B, potential impacts would be the same as the No-action Alternative and Alternative A.

NOTE: Acreages are approximate